

# THE NEW PASTEUR SERUM TO MAKE US YOUNG.

PROFESSOR METCHNIKOFF, of Paris, reports that he has found a way of prolonging youth and postponing old age.

He belongs to the Pasteur Institute, where discoveries of the greatest benefit to humanity have been made within the past generation.

Briefly, Professor Metchnikoff's method is to increase the life-giving red corpuscles of the blood.

All over the world physicians and scientists are just now working on this problem of curing old age with tremendous energy.

A great result must follow from their united efforts.

It would be a glory of the dawning twentieth century.

ALL over the world scientists are busily engaged in trying to find what is practically the fountain of perpetual youth.

A few years ago such a search would have been pronounced absurd and the investigators would have been considered fit subjects for a lunatic asylum. That, however, was before the days of serum therapy.

So wonderful have been the results obtained by scientists who have made a specialty of the serum branch of medical work that there is hardly a laboratory of note in Europe or America in which there is not now being carried on a series of experiments looking to the discovery of some substance which, when injected into the human body, shall at least delay, if it does not altogether prevent, that atrophy of the organs which mankind knows as old age.

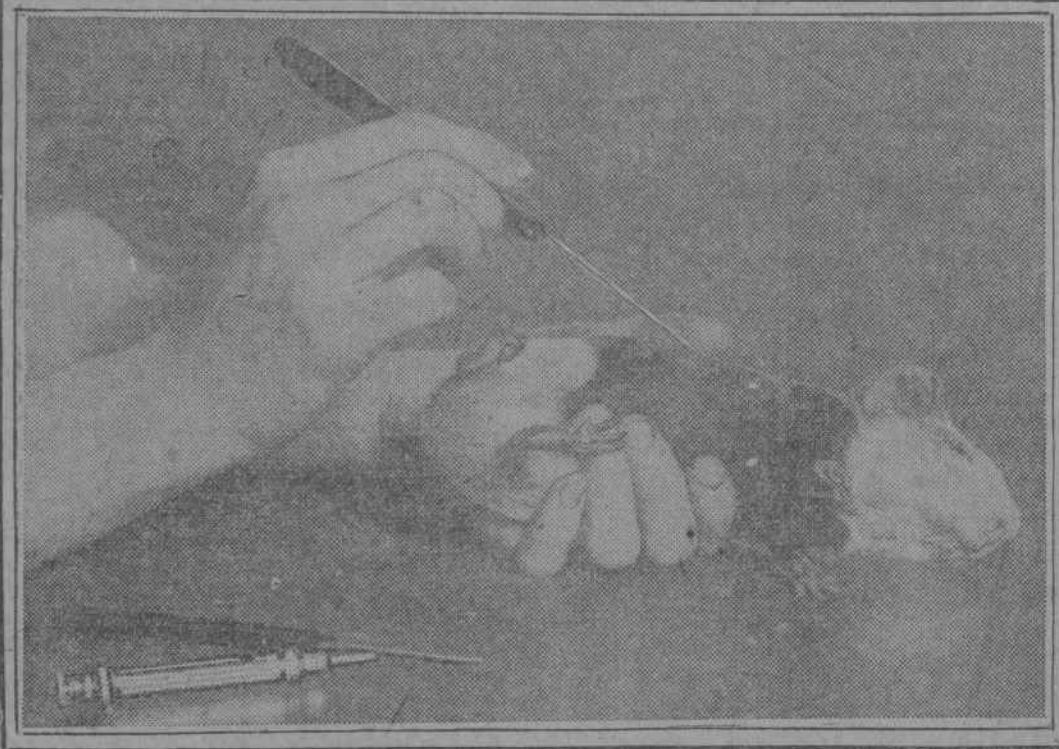
Here and there success has been announced, but in every case, so far, it has been found that the discovery has just missed the rejuvenation point. It was from Paris that Dr. Brown-Sequard some years ago announced the discovery of a medication which would renew youth, and now from the same city comes the announcement of the discovery of a serum that is expected to accomplish all that former sera have failed to do.

This time, too, the announcement comes backed by the imprimatur of the Pasteur laboratory, for it is in that institution that Professor Metchnikoff, one of the intimates, has discovered the new serum.

Professor Metchnikoff's experiments show that the explanation of senile atrophy has hitherto been erroneous. The theory was that certain blood cells devoured others and the vital functions began to weaken. The organic poisons thrown off energetically in youth were believed to remain in the system in old age, or, at least, to be less energetically ejected. These poisoned the finer cells, while without action on those of the conjunctive tissues. The noble cells died, became the prey of the other or plebeian cells, thus bringing atrophy to the organ where the metamorphosis occurred. Professor Metchnikoff has proved conclusively that the noble cells are not dead in the organs atrophied by senility.

Moreover, they may be multiplied. If assisted in their struggle with the plebeian cells, they continue to live actively, as in youth, and, theoretically, the organism will cease to grow old and life will be prolonged. Professor Metchnikoff has found means of affording this resistance, and the results already obtained are extraordinary.

The discovery was made in the following manner: M. Bordet, one of the profes-



TESTING THE SERUM ON A GUINEA PIG.

or's pupils in 1898, published the results of a curious experiment, which consisted of injecting the blood of a rabbit into a guinea pig. Later he injected the blood of this guinea pig into a rabbit and the latter died. Professor Metchnikoff sought the causes of the phenomenon and was soon convinced that the blood of the guinea pig, injected into a rabbit or other vertebrate animal, elaborates the poison that weakens the red globules of the blood and makes them the prey of any disease germ that may gain access.

Starting from the fact that the poison elaborated in the guinea pig is fatal in large doses, Professor Metchnikoff argued that the action in small doses must be stimulating. On this is based the action of all medicines, such as strychnine and arsenic.

He therefore began to inject into rabbits feeble solutions of previously injected guinea pig's blood. A cubic millimetre of the blood of the rabbits thus treated contained before the injections three million red globules. In three or four days the number increased to eight million.

A sovereign remedy against anaemia has been discovered and the theory concerning the red globules has been confirmed. An entire section of the Pasteur Institute is now working to find the specific serums for each particular organ. If the blood serum acts on the red globules of the liver the serum must have a similar effect on the cells of the liver, the brain serum on the brain, and so on. The experiments have demonstrated this.

A specific kidney serum was found some days ago. The Professor is now determining the exact dose for medical purposes. The discovery has now passed the period of mere laboratory experiments. The celebrated Dr. Vidal is now at work on human serum.

It is not difficult to appreciate the immense importance of such a discovery as this. No claims of the miraculous are made for the serum by its discoverer, Dr. Metchnikoff; he does not call it the elixir of life, neither does he declare that the

serum cannot be improved. When an injection of the newly discovered substance is given to an old man he does not straighten up before the eyes of the doctor, neither do his cheeks glow with youth. His gray hair does not promptly regain its color, neither does any other immediately visible change take place. The recipient of the treatment, however, does feel very much stronger and better.

It was Professor Virchow who once said that a man was as old as his arteries. It has always been taught in the schools that the actual cause of old age was atrophy of the muscular coats of the arteries. The better to understand just what Professor Virchow meant, the following explanation of the way in which the arteries perform their function may be helpful:

The arterial system of the human body may be compared to the length of a small calibre rubber tube which has been fastened to the nozzle of the syringe. If the end of the rubber tube is dipped into water and the plunger of the syringe is raised, the rubber tube and the syringe will both be filled with water. If the free end of the rubber tube is now tied up it gives a correct representation of the way in which the arterial system works.

When the plunger of the syringe is pushed down the water is forced into the elastic tube, which swells out under the pressure. As soon as the plunger is released the elasticity of the tube forces the water into the syringe again.

That is exactly what happens in the human circulation, the heart taking the place of the syringe and the arteries that of the rubber tube. Each beat of the heart forces blood into the closed arteries. At the end of the beat, or impulse, the elastic arteries force the blood back again.

This operation is repeated without cessation as long as life lasts. Just as long as the arteries retain their elasticity and their ability to promptly return the blood supplied to them, just so long is the owner of the arteries in possession of perfect health.

When the arteries begin to lose their

elasticity is the time at which old age begins to make itself apparent.

That is what Virchow meant when he said: "Every man is as old as his arteries."

The subject of the deterioration of the arterial coats in man is one that has attracted the attention of many generations of physicians. It has been discovered that the gradual weakening of the muscular fibre of the artery, which results in loss of elasticity, is due to the deposit of various salts of lime in the tissues. In other words, the arteries become calcified.

Up to the present time all attempts to prevent the deposition of lime salts in the arterial coats have resulted in failure. Most of these attempts took the form of the administration of various medicines, intended either to dissolve the lime or to prevent the formation of calcifying materials in the body.

It is to the improvements that have been made in the microscope more than to anything else that an improved method of treatment has been discovered. Scientists noticed that there was a marked difference between the cells found in the lymph of old men and that of healthy youth. It was at once apparent that in youth the cells were larger, more numerous, and much more active.

At about this time it seems to have occurred to many scientists that if a plentiful supply of these life-giving cells could be transferred from a young man to an old one the changes incident to old age would be at least arrested. Some of the people who were smitten with this idea promptly rushed into print and told the public that if such a thing could be done the result would be eternal life. Others made experiments, and, as a result, announced that while the theory was perfect the practice was impossible. They said that live cells could not be placed in the human system without doing a great deal more harm than good, and some of the experiments which

were thereupon attempted seemed to prove the justice of this claim. Time and again the attempt has been made to transplant living cells from one living animal to the other, so that decay or disease in one body might be checked by the healthy cell of life from another. It has nearly always failed. The most familiar example of this can be found in the now obsolete operation of transfusion of blood. In the old days this operation was often performed, it being considered that the infusion of healthy blood into the veins of a sick person would give him strength.

While perfect in theory the operation nearly always failed in practice. Nowadays it is never performed by surgeons of modern attainments. When the infusion of blood is indicated now it is the practice to inject salt water into the patient's veins. This is usually effective. Nevertheless it has been felt that if it were possible to place active life-making cells in a weakened human body it would be a tremendous step toward the attainment of a much longer span of life than is at present vouchsafed to man.

This is the basis of fact upon which Professor Metchnikoff places his theory. He says he has found that he can positively increase the number of red cells, or corpuscles, in the blood by the injection of a carefully prepared serum. To increase the red cells is equivalent to increasing the wear-resisting power of the arteries, for the red cell appears to be the active factor in preserving the tone of these blood vessels.

Most of the work that is now being done looks toward the elaboration of a specific serum for each organ of the human body. For instance, it is believed that a properly made extract of the thyroid gland will have specific action upon the throat and voice and that a serum of the liver or kidney will have direct effects upon those organs.

## Cracked Her Husband for Four Years and Caught Him.

CINCINNATI, Oct. 24.—Living at the Wayfarers' Rest in Covington is a frail little woman who has transformed herself into old age within the space of four years. Romping through the halls of what was once an old mansion or scampering about the lawn outdoors are her two boys, aged six and eight.

When she married Robert Charles in New York, nine years ago, she was sixteen years old. She was only a girl of a little over fourteen when he began to court her, and when he told her of his former wealth, of his travels as a gentleman of leisure, used to luxury in his English home, of the strange lands and peoples he had seen in ten years of migration through Australia and both the Indies, she believed him, for he was nearly old enough to be her father, and, besides, she loved him.

He was in the employ of an insurance company where his address made it easy for him to earn an easy living, and their married life began with fair promise. When five years later he fled with another woman, this child-wife, now a mother, became in a single night a woman with a relentless purpose. For four years, with no capital but the clothes on her back and a spirit which no adversity could crush, this slight creature, now so broken that she starts at the rattling of the electric buttons in the home which shelters her, has dogged the path of her husband and his companion, giving them no peace, forcing them to shift from city to city and from town to town through eight States, until now the man is in jail and the woman under bond to answer a charge of felony.

Throughout this dreary journey, covering thousands of miles, her two boys, Harold and Stanley, have been her constant companions, sometimes sleeping on railroad trains, then in the shelter of charitable institutions and again in the hospitable homes of sheriff, marshal, attorney or judge, whose services she had invoked and whose sympathy had been aroused. How this indomitable little creature ever struggled through this period of time passed among strangers, confiding her secret to few except the police, she scarcely knows herself.

Once when funds ran low she did have to

part with her children for five months, but during the remainder of the time she clung to them, perhaps because they were all she had in the world.

A narrative of her pursuit of Robert Charles would fill a small book. A glimpse at some of her experiences will suffice to indicate what one woman can do. When the husband deserted her he fled with Florence Becker, a married woman with whom he had become acquainted during a call as a life insurance solicitor in Saratoga, N. Y. This was in 1895, Harold was then two years old and Stanley three and a half.

Mrs. Charles caused the arrest of her husband in Troy soon afterward and he was brought back to Saratoga, but escaped on a technicality. Then began the long chase, Jersey City, Newark and Philadelphia were visited in turn, the fugitive coming to grief in the latter city. Here he became very devout while in jail and prevailed upon his wife to withdraw the charges, promising to reform. She forgave him and took rooms in Brooklyn. She soon discovered that he was maintaining an establishment in New York, where Mrs. Becker passed as his sister, Florence Scott. Another arrest and flight followed, and again the young wife became a wanderer, with her two babies. This time the husband came West and Mrs. Charles found him in Covington. He escaped the officers, leaving his companion to bear the blame. Mrs. Charles would not prosecute Mrs. Becker, who repaid this mercy by rejoining the husband soon afterward.

It was the custom of the wife to disguise herself during her chase, sometimes padding her clothing so as to make her slight figure appear like that of a very corpulent woman, and sometimes going to the extent of donning male attire after dark. Her usual form of concealment, however, was a black sunbonnet and a pair of heavy blue goggles. These she would put on upon nearing the towns where she expected to encounter the fleeing couple, who had early in the pursuit learned to dread her relentless vigilance.

Often she started a friendly fellow passenger on the cars by suddenly producing her familiar bonnet and glasses, and, as



In the Pasteur Laboratory a Serum Has Been Discovered That May Enable Men to Live 150 Years in Comfort.



HOW THE SERUM IS INJECTED INTO A RABBIT.

## TRAGEDY OF THE OLD MAID'S CLUB.



THE EIGHT PRETTY YOUNG WOMEN WHO FORMED THE "OLD MAID'S CLUB."

IN Kenosha, Wisconsin, which is virtually a suburb of Chicago, eight of the brightest young society women formed themselves into the "Old Maid's Club" about four years ago. This has lately shown some singular developments.

The club's origin wasn't a case of wounded pride, in not being able to have suitors that animated these girls. They had more admirers than they knew what to do with.

Their object, they said, was to protect themselves against the wiles of designing young men who might seek to ensnare them.

The oaths which the girls took were solemn and awe-inspiring. They pledged themselves to eternal celibacy and the hatred of all men as lovers or husbands. Platonic friendship with men, however, was permitted, and even encouraged in one of the by-laws. This was intended as a

course in character study to develop the young women's insight into masculine nature and prevent them from ever being deceived by men.

These theories seemed very fine, and pleased the girls' self-esteem immensely. The club succeeded well for a year, when the first set-back occurred.

Miss Minnie Kimball, the president, unexpectedly became engaged, and married. The desertion of the president was a great shock to the club, but the other members were still true to their principles.

They got together and passed resolutions denouncing the action of the president. More stringent rules against marriage were enacted. It was resolved that should another member get married all the other club members should attend her wedding in mourning as a sign that she was forever dead to them. Instead of a wedding march

there should be a dirge instead.

A new ironclad oath was invented and administered all around.

The idea of these extra precautions was that since marriage could not be legally prevented it must be made as odious as possible in the eyes of the society.

But these impressive regulations had scarcely been adopted when another member of the club—Miss Belle Stebbins—was married to Douglas Newell.

This occasion was seized for carrying out fully the club's funeral rites, and the wedding was the most grotesque affair ever seen in the town.

The six remaining girls of the "Old Maid's Club" are now looking askance at each other, and every one of them suspecting their sister members of treachery and elopements, while the fate of the organization hangs in the balance.

Before the end of the month, the mother and her two children went to Oklahoma to secure proof that the alleged divorce decree was spurious. She received a certificate from the United States Court, which eventually proved her husband's claim to be false, and on Christmas Eve started back.

"The first thing the children asked me," she said, "was, 'Mamma, will Santa Claus come here in the train?' 'Yes,' I said, and they hung up their stockings on the hat-rack, above the seat. It was a day coach—we couldn't afford a berth, and the passengers stared so at those stockings that I took them down after I had laid the two boys out to sleep on the car seats. They awoke pretty soon, and set up a terrible cry at seeing the stockings gone. The passengers begged me to hang them up again, and so I did. I had a little silver change and I put it in the stockings. There were a lot of cowboys on the car and some women, too, and pretty soon those stockings were full. They got oranges and candies and cakes and the seat was finally full of all kinds of little things. The boys were awake long before daylight, and you should have seen their eyes when they spied the stockings."

After the release of Charles at Pontiac, he lived two days with his wife, and then deserted her again. Then followed a lull in the pursuit. She went to South Bend, Ind., where she stayed over a year working and saving, but keeping a constant watch for her husband. About a year ago he tried to get a secret divorce in Cincinnati, but failed. A second attempt, made a few weeks ago, resulted in arousing the interest of Judge Pfleger, who notified the wife. She came here and astounded Charles by appearing in court with his two boys, dressed in fairyland costumes. He is now in jail on charges of libel and perjury. There is little doubt that he will go to the penitentiary. Mrs. Becker and her little three-year-old boy, son of Charles, are on the Ohio side of the river. Mrs. Charles and her two boys are across the bridge in Covington.

"Yes," said Mrs. Charles, "Robert did have some bad habits. But he was never mean or ugly." Thus did the woman, who never faltered in her mission of justice, sum up her judgment against the man who had deceived her.

It was at Pontiac that Charles set up in evidence a bogus divorce decree which he said he had obtained in Oklahoma. The wife was frantic, and, going to Detroit, she appealed to Governor Plafiege, who summoned the Attorney-General, and the local authorities were advised to take no final action until Mrs. Charles could prove the falsity of the claim. In the meantime, while she was working in the hotel, her children were sending her from the Wayfarers' Rest in Covington letters in the form of rude drawings and printed words, and, on December 1, they started to join her. Each boy had a tag around his neck and all the bundles he could carry. Mrs. Charles met them at Detroit. "Oh, here's my muzzler," cried little Harold, running up. The big railroad conductor, who was walking between the two boys, at the sight began to cry as though he were a boy himself.